

*LAURESCU, C.*

ROMANIA

TICH MINH, Hoang, Professor; LAURESCU, C., MD; BRAUN, I., MD;  
ZAMFIR, Gh., MD; VAN SO, Pham; VAN MAU, Nguyen.

Work compiled at the Institute of Hygiene in Hanoi, during  
the activity of the Rumanian sanitary team in the  
Democratic Republic of Vietnam, 1959-1960.

Bucharest, Igiena, Vol XII, No 2, Mar-Apr 63, pp 149-154.

"Enrichment in Vitamin B<sub>1</sub> of "Nuoc-Mam", a national Vietnamese  
Food."

(6)

LAURESCU, Const.; POPA, Gavrila

Evaluation of the freshness of beef by determination of ammonia in fluid extract. Rev. igiena microb. epidem., Bucur. no.3:81-88 July-Sept 54.

(MEAT

beef, determ. of ammonia in fluid extract for  
evaluation of freshness of meat)

(AMMONIA, determination

in meat extract, value in evaluation of freshness  
of meat)

COUNTRY : ROMANIA  
 CATEGORY : Chemical Technology. Chemical Products and Their Applications. Food Industry  
 ABS. JOUR. : RZhKhim., No 19, 1959, No. 69592  
 AUTHOR : Laurescu, C.; Popa, G.  
 INSTITUTE : -  
 TITLE : Determination of Ammonium Content In the Sterilized Meat Preserves  
 ORIG. PUB. : Igiena, 1957, 6, No 3, 266-273

ABSTRACT : Presented are the results of  $\text{NH}_3$  determinations in fresh beef and pork, in beef and pork after 2-3 days of storage in a refrigerator and in the "Meat in Its Own Juice" preserves made of the same type of meat immediately after sterilization (120°, 90 min.) and 1 month after the sterilization. It was established that  $\text{NH}_3$  content in preserves made of fresh pork and beef increased in the process of manufacture and up to the end of sterilization respectively by 19.5 and 23 mg %, in the meat preserves stored in refrigerators respectively

Card: 1/2

H - 130

SOV/137-58-10-21156

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 105 (USSR)

AUTHOR: Lauri [Lauri, K.]

TITLE: Welding Jigs (Svarochnyye prispobleniya) in Estonian

PERIODICAL: Tehnika ja tootmine, 1958, Nr 3, p 23; :

ABSTRACT: A stand (S) for welding and assembly of frame-shaped components is proposed. The parts to be welded are positioned on the S by means of two adjustable pins and are then secured with the aid of a bolt-and-nut arrangement. The frame of the S is balanced by means of a counterweight and is equipped with two rings permitting free rotation.

1. Welding--Equipment

I. G.

Card 1/1

D. LAURIAN, L.

4  
1. The action of deoxyribonucleic acid on the adrenal glands of albino rats. A histological and histochemical study. C. I. Parhon, I. Banu, L. Laurian, and D. Klingher. J. Commun. acad. rep. populare Romania 2, 87-90(1952). Forty-two albino rats received daily doses of 1.5-3 mg. of thymonucleic acid for 5-10 months. An atrophy (1) of 27-34% of the adrenal glands of the males was observed, but no histological or histochem. changes were found. It is assumed that the 1 depresses the function of the adrenal glands. Emmanuel Merdinger

~~Lydia~~, LAURIAN, Lydia

✓ The orientation of embryogenesis. III. Action of  
thyroxine on the embryonic and postembryonic develop-

3

ment of the chicken. C. I. Parham, Lydia Laurian, and N.  
Alban. *Comms. Acad. Rep. Populare Romane* 4, 89-91  
(1954).—Embryos of Leghorn chickens received daily in-  
jections of 5.5-10  $\gamma$  thyroxine in the chorioallantois. The  
result was dwarfism which developed during the extra-  
embryonic period. The cartilages were not formed, but re-  
mained largely open. The incubation time was not modi-  
fied. The toxicity of the thyroxine on the nervous system  
is proposed as an explanation. A. Halasz

USSR / General Biology. Individual Development.

B-4

Abs Jour: Ref Zhur-Biol., No 10, 1958, 42817.

Author : Parkhon, K. I.; Laurian, Lidiya; Belechanu, Marianna;  
Albu-Aderka, Nataliya.

Inst : Not given.

Title : Controlled Embryogenesis. Report 5. Effect of Insulin on Hen Embryonic Development (Congenital Cataract and Achondroplasia).

Orig Pub: Zh. med. nauk. Akad. RNR, 1956, 1, No 2, 5-47.

Abstract: Studies were conducted on eggs of White Leghorn and Rhode Island varieties. All told, 1000 eggs were used. Insulin (I) was introduced either by drops on the chorioallantois, or by injection through the shell. The eggs were treated daily or every other day, beginning with the 7th and up to the 14th day of incubation. In each injection

Card 1/3

13

USSR / General Biology. Individual Development.

B-4

Abs Jour: Ref Zhur-Biol., No 10, 1958, 42817.

Abstract: usually 4-8  $\gamma$  of I was introduced, dissolved in 0.008-0.05 ml of distilled water, so that the embryo received a total dose of 4-72  $\gamma$ . The control embryos were given distilled water, solutions of phenol, cresol, and acidified cresol in the same concentrations and at the same pH as the I solutions. Introduction of daily I doses up to a total dosage of 20-72  $\gamma$ , beginning with the 7, 8 and 9th day of incubation, causes the formation of a partial or total bilateral cataract, appearance of achondroplasia, different degrees of delayed total development, and a lengthening of the incubation period by 1-3 days. In order to develop achondro-

Card 2/3



PARHON, C. I., Academician; LAURIAN, L.; BALACEANU, M.; ALBU, N.

Experiments on controlled embryogenesis. Bul. stint., sect. med.  
8 no.2:457-498 Apr-June 56.

(EMBRYO

attempted control of develop. of chick embryo with hormones,  
tissue extracts, insulin & other drugs)

(HORMONES, eff.

on develop. of chick embryo)

(TISSUE EXTRACTS, eff.

on develop. of chick embryo)

(INSULIN, eff.

on develop. of chick embryo)

RUMANIA/Human and Animal Physiology (Normal and Pathological)  
Internal Secretion. Epiphysis.

T

Abs Jour : Ref Zhur Biol., No 6, 1959, 26745

Author : Parhon, C.I., Laurian, L., Balaceanu, M., Albu, N.

Inst : -

Title : XVII. The Influence of Epiphysis on Endocrine Glands  
of Chicken Embryo

Orig Pub : Studii si cercetari endocrinol. Acad, RPR, 1957, 8,  
No 1, 104-105

Abstract : The introduction of epiphysis extract (EE) to chicken  
embryo stimulates the development, growth and appearance  
of feathers and also increases resistance to pathogenic  
factors. In one-day-old chicks which received EE dur-  
ing embryonal period, no changes were found in hypophy-  
sis, adrenals, thyroid, thymus and pancreas, testes log-  
ged somewhat in development. In control chicks spermatog-  
oniae and spermatocytes were discovered; in those

Card 1/2

RUMANIA/Human and Animal Physiology (Normal and Pathological)

T

APPROVED FOR RELEASE: 06/20/2000  
Epiphysis  
CIA-RDP86-00513R000928810018-4"

Abs Jour : Ref Zhur Biol., No 6, 1959, 26745

receiving EE only spermatogoniae with single spermatocytes. -- S.M. Malamud

Card 2/2

LAURIAN, N.

BALACRANU-STOLNICI, C.; FAIUTZ, S.; LAURIAN, N.

Relations between the vestibular apparatus and the cerebral cortex;  
labyrinthine conditioned reflexes in cats. Bul. stiint., sect. med.  
6 no.3:653-661 July-Sept 54.

1. Comunicare prezentata de academician A.Kreindler in sedinta din  
30 octombrie 1953.

(VESTIBULAR APPARATUS, physiology

relation to cerebral cortex, in rabbits)

(CEREBRAL CORTEX, PHYSIOLOGY

relation to vestibular funct. in rabbits)

(REFLEX, CONDITIONED

labyrinthine, exper. form in rabbits)

LAURIAN, Sdico

Study of alkaline mineral water in aerosols in therapy of chronic bronchopulmonary diseases. Rev. st. med., med. int., Bucur 6 no.1:107-113 Jan-Mar 54.

1. Clinica Balneologica I.M.F. bucuresti.

(BRONCHITIS, therapy

Mineral water, alkaline, admin., aerosol)

(EMPHYSEMA PULMONARY, therapy

(SAME)

(ASTHMA, therapy

(SAME)

(MINERAL WATER, ther. use

asthma, bronchitis & pulm. emphysema, admin., aerosol)

**"APPROVED FOR RELEASE: 06/20/2000**

**CIA-RDP86-00513R000928810018-4**



**APPROVED FOR RELEASE: 06/20/2000**

**CIA-RDP86-00513R000928810018-4"**

RUMANIA/Human and Animal Physiology - Physiology of Work and Sport.

T-12

Abs Jour : Ref Zhur - Biol., No 7, 1958, 32303

Author : Solomon, L., Laurian, S., Vulcan, V.

Inst : -

Title : Temperature of the Body as an Indicator of Thermic Comfort or Discomfort Depending on the Microclimate of the Place.

Orig Pub : Igiena, 1956, 5, No 4, 17-27.

Abstract : No abstract.

Card 1/1

- 162 -

S. LAURIAN, OERIN, S., VOINESCU, M., IONESCU, M., WEITMAN, R., WEXLER, B., and SCHOR, M.

Relation between the chemical structure and the tuberculostatic action of chemotherapeutic agents. I. Thiosemicarbazone. S. Oerin, M. Voinescu, M. Ionescu, R. Weitman, B. Wexler, S. Laurian, and M. Schor. Acad. rep. populare Rominc, Bul. Stiint. Sect. Stiint. med. 8, No. 1, 297-305 (1956).--The etherification of the hydroxyl group of p-hydroxybenzalthiosenicar bazone (I) with glycerol gives the p-dihydroxypropobenzalthiosemicarbazone, which has a different toxicity and tuberculostatic activity as compared to the original compound I, depending on the position of the glyceryl radical. In the ortho compd., the tuberculostatic activity is enhanced as well as the toxicity. In the meta compd., the activity is diminished, while the toxicity is increased, and finally in the para compd., the tuberculostatic activity is increased while the toxicity is diminished. The aminobenzalthiosemicarbazones, with the amino group blocked with allythiocrea, has in vitro a higher activity than the p-acetylamino benzalthiosemicarbazone (T. B. 1) and a lower toxicity. In the series of o-, m-, and p-allyl-thioureidobenzalthiosemicarbazones, the more active seems to be the meta derivative, which produces in vitro, on Sauton media, a total inhibition of  $1 \times 10^7$  and a partial inhibition of  $1 \times 10^8$ . T. B. 1 produces  $2 \times 10^4$  to  $4 \times 10^4$ , resp.

Marthe Areos

LAURINAVICHENE, M. A.

LAURINAVICHENE, M. A. -- "Work on the Lexicon in the Process of Reading Russian Texts of the Older Classics in the Lithuanian Intermediate School." Moscow, 1956. (Dissertation for the Degree of Candidate in Pedagogical Sciences).

So.: Knizhnaya Litopis', No. 7, 1956.



LAURINAVICHYUS, S.A. [Laurinavičius, S.A.], red.; LUKOSHEVICHYUS, St.  
[Lukoshevičius, St.], tekhn. red.

[Measures for the development of agricultural production; eastern zone of Lithuania] Meropriiatia po razvitiu sel'skogo proizvodstva zona Litvy. Vilnius, Gos. izd-vo polit. i nauchn. lit-ry, 1960. 191 p. (MIRA 14:10)

1. Lithuanian S.S.R. Žemės ūkió ministerija.  
(Lithuania--Agriculture)

L 40859-66 EWI(1)/EWI(m)/EWP(t)/ETI IJP(c) RDW/JD/AT

ACC NR: AT6023226

SOURCE CODE: UR/2910/65/005/003/0409/0415

AUTHOR: Gashka, I. I. -- Gaska, I.; Laurinavichyus, A. K. -- Laurinavicius, A.

64  
8+1

ORG: Vil'nyus State University im. V. Kapsukas(Vil'nyusskiy Gosudarstvennyy universitet)

TITLE: Investigation of photoconductivity in polycrystalline CdS and CdSe

SOURCE: AN LitSSR. Litovskiy fizicheskiy sbornik. v. 5, no. 3. 1965, 409-415

TOPIC TAGS: cadmium sulfide, cadmium selenide, semiconductor conductivity, photoconductivity

ABSTRACT: To elucidate the mechanism of photoconductivity of high-resistance semiconductors, the photoconductivity of polycrystalline CdS and CdSe semiconductors was investigated by two methods, one of which reacted only to a change of the intercrystalline barriers and the other to a change in the concentration of the carriers. The high-resistance polycrystalline conductors are represented as a heterogenous system consisting of randomly oriented crystals of the semiconductor surrounded by the intercrystalline substance. A potential barrier arises between the individual crystals. A modified cavity resonator method which permits measuring the absolute magnitude of conductivity is used in the investigation. The conductivity of the investigated specimens was changed by means of illumination from two incandescent lamps through a hole in the end of the resonator. The intensity of the illumination was changed by means of

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L 40859-66

ACC NR: AT6023226

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neutral filters. The investigated specimens were tablets 1.2 mm thick and 8.0 mm in diameter pressed from CdS and CdSe. The change of conductivity as a function of the intensity of illumination of the specimens operating on d-c and an SHF current was investigated. It was found that there was a great difference between the results obtained for SHF and d-c. For the d-c the lux-ampere characteristics are nonlinear, whereas for the SHF current the conductivity changes by a linear law. For d-c the conductivity changed on the average by a factor of  $10^4$ -- $10^5$ , whereas for the SHF current the change was only by 1 order. For all specimens the conductivity measured for the SHF current proved to be several orders higher than that for the d-c. This result shows that the conductivity of the crystals is much greater than that of the barriers. The results obtained are explained well by the barrier theory of photoconductivity. This permits the conclusion that in high-resistance nonsingle-crystal semiconductors the intercrystalline barriers are the main contributors to a change in the conductivity of photoresistors. Orig. art. has: 1 table, 5 figures, and 19 formulas.

SUB CODE: 20/ SUBM DATE: 01Feb65/ ORIG REF: 008/ OTH REF: 006

Card

2/2 LC

LAURINCIK, Jozef, dr., inz., C.Sc.

Activities of the Sheep Breeding Research Institute in  
Trencin. Vestnik vyzk zemedel 10 no.1:40-43 '63.

1. Riaditel Vyskumneho ustavu ovciarskeho, Trencin.

LAURINČIK, Jozef, dr., inz., Sc.C.

Preliminary results of the crossing of domestic sheep with part Texel blooded with Lincoln, Leicester and Kent rams. Vest vyzk zemedel 9 no.12:547-550 '62.

1. Riaditel Vyskumneho ustavu ovciarskeho, Trencin.

LAURINGER, V.

"The Lessons of Forest Belt Planting in the Experimental Farms of Sopronhorpacs in 1952" p. 320 (Agrartudomány, Vol. 5, No. 10, October, 1953, Budapest)

SO: Monthly List of East European Vol. 3, No. 3 1954  
Accessions, Library of Congress, March 1954, Uncl.

LAURINGER, V.

Effect of forest belts for protection against wind and heat. p. 224,  
(ACRARTUDOMANY, Budapest, Hungary), Vol. 6, No. 8, Aug. 1954.

SC: Monthly List of East European Accessions, (EEAL), IC, Vol. 4,  
No. 5, May 1955, Uncl.

VESKI, Arvo; LAURINGSON, A., retsenzent; MÄND, H., retsenzent;  
KASSO, T., red.

[Erection of structures] Ehitus-konstruksioonide  
montaaž. Tallinn, Kirjastus "Eesti Raamat," 1964. 141 p.  
[In Estonian] (MIRA 18:1)



LAURINGSON, A.

Possibility for using the human eye tracking system for purposes of control. Izv. AN Est. SSR. Ser. fiz.-mat. i tekhn. nauk 13 no.2:121-125 '64. (MIRA 17:9)

1. Academy of Sciences of the Estonian S.S.R., Institute of Cybernetics.

LAURINGSON, A.I.; SHCHEDROVITSKIY, L.P.

Some data on the tracking system of an eye. Biofizika 10 no.1:  
137-140 '65. (MIRA 18:5)

1. Institut avtomatiki i telemekhaniki AN SSSR, Moskva.

L 38972-65

ACCESSION NR: AP5009290

S/0217/65/010/002/0369/0369

AUTHOR: Lauringson, A. I.; Shchedrovitskiy, L. P.

TITLE: The accuracy of eye movement following displaced fixation points

SOURCE: Biofizika, v. 10, no. 2, 1965, 369

TOPIC TAGS: photo optics, ocular dynamics, fixation point, optometry

ABSTRACT: The purpose of the experiment was to determine the accuracy of eye tracking movements. The subject's head was placed rigidly facing a screen on which were fixed and moving points of light. The angular displacement between fixed and moving points was 1, 2.5, 5, 7.5, and 10° in any direction. The distance between the screen and the subject's eyes was 1.6 m. A photo-optical method was used to register eye motion. Individual eye movements including fixation on initial and final points and tracking of a skipping point or points were photographed. By comparing the dynamics of eye movements in response to uniform stimuli it was possible to establish the accuracy of eye tracking motion. The data revealed that at all angular displacements regardless of the direction, the accuracy of eye tracking was on the order of 4.5—6'. Tracking motions were accomplished with 1, 2, and in some cases, 3 hops of the eye. The number of hops depended on the magnitude of

Cord 1/2

L 38972-65

ACCESSION NR: AP5009290

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displacement. At  $1^\circ$ , eye tracking movement across the screen took place in one hop. At angular values of  $7.5^\circ$  and  $10^\circ$ , however, 1 hop per tracking motion was observed in only 10% of the cases. It was found that the first hop in that tracking motion containing several hops was, in most cases, shorter (10 times) than the whole tracking motion. The error in the direction of the first hop of the eye was most often  $1-5^\circ$ , sometimes reaching  $15^\circ$ . The direction along a horizontal plane was more accurate. In many cases, hopping took place along a distorted trajectory. Of interest was the fact that jumps between identical original and terminal points could have different trajectories. The accuracy established in the experiment ( $4.5-6'$ ) corresponds well with the magnitude of zones of insensitivity determined by Glezer in 1959. Orig. art. has: 1 figure. [CD]

ASSOCIATION: Institut avtomatiki i telemekhaniki AN SSSR, Moscow (Institute of Automation and Telemechanics, AN SSSR)

SUBMITTED: 02Jun64

ENCL: 00

SUB CODE: LS,OP

NO REF SOV: 001

OTHER: 000

ATD PRESS: 3228

*ml*  
Card 2/2

L 08793-67 EWT(m)/EWP(j) IJP(c) WW/RM  
ACC NR: AP6030843 (A, N) SOURCE CODE: UR/0191/66/000/009/0010/0011

AUTHOR: Gel'fman, Ya. A.; Zemlyanskiy, N. N.; Lauris, I. V.; Syutkina, O. P.; Kuskova, V. P.; Panov, Ye. M.

ORG: none

TITLE: Stabilization of polyvinylchloride by organotin oxanes

SOURCE: Plasticheskiye massy, no. 9, 1966, 10-11

TOPIC TAGS: vinyl chloride, polymer, tin compound, organotin compound, organometallic compound, solid mechanical property, heat resistance

ABSTRACT: The effect of organotin oxane-type additives  $[\text{CH}_3\text{COO}(\text{C}_4\text{H}_9)_2\text{SnO}]$ ,  $\text{CH}_3\text{COO}[(\text{C}_4\text{H}_9)_2\text{SnO}]_4\text{OCCH}_3$ , and  $[\text{C}_{11}\text{H}_{23}\text{COO}(\text{C}_4\text{H}_9)_2\text{Sn}]_2\text{O}$  on the thermal stability of polyvinylchloride was investigated. The aging characteristics of the stabilized PVC was tested according to GOST 10226-62 and the decomposition temperature was tested according to the GOST 5960-51 standard. It was found that the PVC stabilized with organotin oxanes had a thermal stability comparable to that of PVC stabilized with conventional  $\text{R}_2\text{PbX}_2$  stabilizers. It was also found that the organotin oxane stabilizer based on acetic acid was as effective as that based on lauric acid. Orig. art. has: 2 tables.

SUB CODE: 11/ SUBM DATE: 00/ ORIG REF: 004/ OTH REF: 004.

Card 1/1 net UDC: 678.743.22:678.048.9

LAURIS, V.

Sowing of knowledge yields results. Sov. profsoiuzy 20 no.3:  
10-12 F '64. (MIRA 17:3)

1. Sekretar' Latviyskogo respublikanskogo soveta professional'-  
nykh soyuzov, predsedatel' byuro po rukovodstvu profsoyuznymi  
organizatsiyami sel'skogo khozyaystva, Riga.

NOVNIN, Mikhail Savel'yevich; IZRAYELIT, Aron Borisovich;  
MKHITAROV, G.M., inzh., retsenzent; LAUTNER, E.M., nauchn.  
red.; SHAURAK, Ye.N., red.

[Theoretical mechanics] Teoreticheskaya mekhanika. Leni-  
grad, Sudostroenie, 1964. 355 p. (MIRA 17:9)

LAURNET, R.

"Contribution to the Question of the Quieting of Agitated Psychiatric Patients. Following a Lecture in the Seminar of the State Therapy Institute in Dobran."

SO: Neurol. a psych., Prague, Vol. 16 (1953), No. 3, pp. 129-133.



LAUROVA, L.; DIVIS, J.

Surgical therapy of adnexal inflammation with special reference to the duration of the effect. Cesk. gyn. 27 [41] no.6/7:511-516 Ag '62.

1. II. gyn.-por. klin. fak. vseob. lek. KU v Praze, prednosta prof.  
dr. J. Lukas, DrSc.

(ADNEXITIS)

LAUROVA, L.; MACKU, F.; TRNKA, V.

Some coments and experiences with the Aldridge technic  
of abdominal hysterectomy. Cesk. gynek. 29 no.5:331-333  
Je'64.

1. II. gyn.-por. klin. lek. fak. vseob. lek. KU [Karlovy  
University] v Praze; prednosta: prof. dr. J. Lukas, DrSc.

LAUROW, Z.

"Wood drying by making use of the sucking capability of the tree crown."

p. 49 (Sylvan, Vol 102, no. 9, Sept 1958, Warsaw, Poland)

Monthly Index of East European Accessions (AAEI) LC, Vol 9, Sept 58

LAUROW, Z.

An attempt at evaluating the usefulness of the method of boring for moisture research. p. 19

SYLWAN (Wydział Nauk Rolniczych i Lesnych Polskiej Akademii Nauk i Polskie Towarzystwo Lesne) Warszawa, Poland. Vol. 103, no. 3, Mar 1959

Monthly List of East European Accessions (EEAI) IC, Vol. 8, no. 9, September 1959.  
Uncl.

LAUS, D.

. Problems of autumn variation in railroad transportation. p. 12

ZELEZNICE, Beograd, Vol 12, No. 1, Jan., 1956

SO: EEAL, Vol 5, No. 7, July, 1956

LAUS, S.; LOVRECEK, I.

Drying lignite from Vukomeričke Gorice. p. 109.

KEMIJA U INDUSTRIJI. (Društvo kemičara-tehnologa NRH) Zagreb, Yugoslavia.  
Vol. 8, no. 5, May 1959.

Monthly list of the East European Accessions (EEAI), LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

EYZEN, O.G.; KIVIRYAKHK, S.V.; KOGERMAN, A.P.; LAUS, T.N.; APPO, I.Kh.

Chemical composition of tar from dictyonemic shale. Khim.i  
tekh.topl. i masel 5 no.9:37-42 S '60. (MIRA 13:9)

1. Institut khimii AN ESSR.  
(Estonia—Oil shale)

38591

S/081/62/000/010/074/085  
B166/B144

15.631✓  
AUTHORS:

Lausch, Adam, Sulima, Tadeusz, Wajda, Helena, Rodziński,  
Władysław, Matyszkiewicz, Stanisław, Nikodem, Jan, Okrasa,  
Jerzy

TITLE:

A method of producing varnish for impregnating fabric in the  
production of electrical insulating panels

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 10, 1962, '635, abstract  
10P239 (Polish Patent 44508, June 7, 1961)

TEXT: The varnish for impregnating fabric to be used for electrical  
insulating panels is obtained by mixing a solution of epoxy resin in  
acetone along with an amine curing agent and a solution of phenolic resin,  
without free phenol, in  $C_2H_5OH$  with added urotropine. The special feature  
of this method is the use of a phenolic resin with the free phenol removed  
by toluene extraction. Electrical insulating panels made with the  
aforesaid varnish show high mechanical strength and heat resistance up to  
 $180^{\circ}C$ . Example. A solution is prepared with 51.5 parts by weight epoxy

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A method of producing varnish ...

S/081/62/000/010/074/085  
B166/B144

resin and 2.5 parts by weight amine in 46 acetone. To prepare the phenol-free resin 55 parts by weight phenol and 45 parts by weight 40%  $\text{CH}_2\text{O}$  with  $\text{HCl}$  (specific gravity 1.1), added at the rate of 1 ml per 1 kg of phenol, are heated at 95-100°C and at normal pressure for 40 min. When condensation is complete the resin is distilled in vacuo (residual pressure 200 mm Hg). The dehydrated resin is treated with toluene in a ratio of 1 : 1, after which the remaining toluene is distilled off in vacuo (residual pressure 200 mm Hg). A solution is prepared from 48 parts by weight phenol-free resin and 4 parts by weight urotropine in 48 parts by weight  $\text{C}_2\text{H}_5\text{OH}$ . The varnish is obtained by mixing 95% of the epoxy resin solution and 5% of the phenolic resin solution. Glass fabric is steeped in the varnish and is impregnated so as to contain 30-40% resin after drying. [Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/013/050/054  
B160/B101

AUTHORS: Smoczyński, Józef, Lausch, Adam

TITLE: A method of producing electrical insulating varnish

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 638, abstract  
13P260 (Polish patent 43451, August 31, 1960)

TEXT: Terephthalic acid is esterized with a mixture of ethylene and diethylene glycol in the proportion 1:1-2:1 in the presence of  $ZnCl_2$  and  $Ca(CH_3COO)_2$  as catalysts and then using glycerine. 0.7-1 part by weight of the glycol mixture is used to 1 part by weight of terephthalic acid. The glycerine is added at the rate of 1 part by weight to 3-4 parts by weight of the glycol mixture. The ester obtained is distilled at  $250^\circ C$  in a vacuum for several hours with a small amount of adipic acid added and the product was dissolved in a mixture of cresol and solvent naphtha. The coatings are heat-resistant up to  $155^\circ C$ , are resistant to moisture and chemical reagents, have high elasticity, give good adhesion to a conductor, stability to ageing and good dielectric properties. Unlike other varnishes

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A method of producing electrical...

S/081/62/000/013/050/054  
B160/B101

based on terephthalic acid used for enamelling conductors, this varnish does not run and the coating is even in thickness. Example: 180 g of terephthalic acid are added to a mixture of 210 g of ethylene glycol and 150 g of diethylene glycol. The mixture is heated to 200°C in the presence of 2 g of  $ZnCl_2$  and 0.4 g of  $Ca(CH_3COO)_2$ . Then 100 g of terephthalic acid are added, heating is continued for 1 hour at the same temperature, another 100 g of terephthalic acid are added and heated for 1.5 hours at 200°C, 100 g of glycerine are added and heated for 3-5 hours at 200°C. The reaction mixture is distilled in a vacuum for 1 hour, the temperature being gradually raised to 210°C at a pressure of 60 mm Hg; 5 g of adipic acid are added and the mixture distilled in a vacuum for 2.5 hours, the temperature being gradually raised to 250°C at a pressure of 1 mm Hg. The product is dissolved in a mixture of cresol and solvent naphtha so that the dry residue content is 35-45%. The solution is filtered and centrifuged. The varnish so obtained is suitable for enamelling round and rectangular copper winding wire and for other purposes where electrical insulating materials with a high resistance to heat are required. [Abstracter's note: Complete translation.]

Card 2/2

VILOVSKI, Slavomir; LAUSEVIC, Miroslav

Geologic structure of the Plasa Mountain, Hercegovina. Geol  
glas BiH 9:77-85 '64.

1. Submitted May 30, 1964.

MAKSIMCEV, Stevan; LAUSEVIC, Nadažda

Stratigraphy of the terrain between Tomina and Kukavica near  
Sanski Most. Geol glas BiH 9:17-54 '64.

CHERKES, L.D.; CHERKES, Yu.I.; ZHENISHEK, Z. [Zenisek, Z.]; LAUSER, O.  
[Lauser, O.]

Rapid method of paper chromatography. Zhur. anal.khim. 18  
no.12:1436-1441 D '63. (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut antibiotikov, Roztoki u Pragi,  
Chekhoslovakiya.

HAGGERTY, A.Ya.; LAUSHKIN, N.P.

Complete processing of potatoes to starch and ethyl alcohol.  
Spir. prom. 26 no. 6:30-34 '60. (MIRA 13:11)  
(Potatoes) (Starch) (Ethyl alcohol)

KARPOV, A.A., inzh.; KUSTOBAYEV, G.G., inzh.; LAUSHKIN, N.P., inzh.;  
LANGE, Z.I., inzh.; NOSYREVA, M.D., inzh.; SAVEL'YEV, G.V., inzh.;  
SHCHULEPNIKOV, I.S., inzh.; Primali uchastiye: SYCHKOV, B.A., inzh.;  
MILIKHIN, A.Ye., inzh.; ZAYTSEV, R.A., inzh.; ZARZHITSKIY, Yu.A.,  
inzh.; LEONT'YEV, A.I., inzh.; VIKTOROVA, T.Ye., inzh.; SERIKOV, A.A.,  
inzh.

Operation of recuperator soaking pits in the 1150 MMK rolling  
mill. Stal' 22 no.8:753-758 Ag '62. (MIRA 15:7)

1. Magnitogorskiy metallurgicheskiy kombinat.  
(Furnaces, Heating) (Rolling mills)



LAUSHKIN, S. I.

Laushkin, S. I., Experience of using aerial surveying for studying sea waves,  
Tr. Leningr. gidrometeorol. in-ta (Works of the Leningrad Hydrometeorological Institute)  
No 7, 1958, p220-222; (RzhGeofiz 10/58-7136)

LAUSHKIN, S. I.

Laushkin, S. I., Regime of sediments of crescent-shaped islands (Kulsly Island),  
Tr. Leningr. gidrometeorol. in-ta (works of the Leningrad Hydrometeorological Institute),  
No 7, 1958, p 223-226; RZhGeofiz 11/58-7975)

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Laushkin, S. I., Regime of deposits of serpentine-form islands (of the type of the island of Kulal) Tr. Leningr. gidrometeorol. in-ta (Works of the Leningrad Hydrometeorological Institute), No 7, 1958, p 223-226; (RZhGeogr 8/58-19366)

DANILKO, A., kapitan 1-go ranga; LAUSHKIN, V., kapitan 3-go ranga

Submariners master the complicated machinery of their boats.  
Komm.Vooruzh.Sil 1 no.2:56-59 0 '60.

(MIRA 14:8)

(Submarine boats)

LAUSHKINA, M. M.

PA 42/49<sup>T75</sup>

USSR/Metals

Luminescence

Laboratories, Testing

Mar/Apr 49

"Luminescence Method of Defectscopy in Metalworking Industries," M. M. Laushkina, F. I. Rogov, 3 pp

"Iz Ak Nauk SSSR, Ser Fiz" Vol XIII, No 2

Detection of fissures in metal parts is effected by pouring a fluorescing liquid on the part to be tested and then removing it from the surface.

Fissures and spots appear as shining lines on a dark background. The deeper the fissure, the brighter the line. Method has been introduced in many factories,

42/49<sup>T75</sup>

USSR/Metals (Contd)

Mar/Apr 49

and is used particularly in checking non-magnetic material parts (coatings from aluminum and magnesium alloys, austenite steels, etc.) which do not lend themselves to roentgenoscopy because of shape.

42/49<sup>T75</sup>

RASHBA, Ye.Ya. [Rashba, O.IA.]; LAUSHNIK, G.M. [Laushnyk, H.M.]

Decomposition of some phosphorus organic compounds by B.  
megatherium var. phosphaticum.. Mikrobiol. Zhur. 22 no. 1:22-26  
'60. (MIRA 13:10)

1. Institut mikrobiologii AN USSR.  
(BACILLUS MEGATHERIUM) (PHOSPHORUS ORGANIC COMPOUNDS)

RASHBA, Ye.Ya. [Rashba, O.IA.]; LAUSHNIK, G.M. [Laushnyk, H.M.]

Lipopolysaccharides of alkali-forming of Enterobacteriaceae.

Mikrobiol. zhur. 26 no.3:22-27 '64.

(MIRA 18:5)

1. Institut mikrobiologii AN UkrSSR.

LAUSHNIK, G.M. [Laushnyk, H.M.]

Comparative study of the polysaccharide-containing fraction of  
alkali-forming enterobacteria obtained after extraction of a  
complete antigen. Mikrobiol. zhur. 27 no.2:17-23 '65. (MIRA 18:5)



LAUSHNIK, G.M. [Lushnyk, H.M.]

Comparative study of the "firmly bound" polysaccharide-containing  
fraction of alkali-forming enterobacteria. Mikrobiol. zhur. 27  
no.5:3-7 '65. (MIRA 18:10)

1. Institut mikrobiologii i virusologii AN UkrSSR.

AYZENMAN, B.Ye. [Aizenman, B.IU.]; SHVAYGER, M.O.; MANDRIK, T.P.;  
BREDIKHINA, A.N. [Bredikhina, A.M.]; ORISHCHUK, L.F. [Oryshchuk, L.F.];  
KOLESOVA, E.A. [Kolesova O.A.]; MISHENKOVA, Ye.L. [Mishenkova, O.L.];  
GALKINA, T.A. [Halkina, T.O.]; ZAKHAROVA, I.Ya.; RASHBA, Ye.Ya.  
[Rashba, O.IA.]; LAUSHNIK, G.M. [Laushnyk, H.M.];  
PREOBRAZHENSKAYA, N.Ye. [Preobrazhens'ka, N.IU.]

Effect of substances of bacterial origin on Ehrlich's carcinoma.  
Mikrobiol. zhur. 27 no.6:61-67 '65. (MIRA 19:1)

1. Institut mikrobiologii i virusologii AN UkrSSR.

LAUSKA, A.

Root fungus (*Fomes annosus* Fr.) in pine stands [in Latvian with summaries in English and Russian]. *Vestis Latv ak* no.12:123-128, '61.

1. Latvijas PSR Zinatnu akademijs, Messaimniecibas problemu un koksnes kimijs instituts

ZALIS, A.I., kand. sel'skokhoz. nauk; MEKLENBURGAS, A.M., kand. sel'skokhoz. nauk; LAUSKIS, S.K.

Using peat in agriculture in the Lithuanian S.S.R. Zemledelie 25 no.7:  
72-77 J1 '63. (MIRA 16:9)

1. Litovskiy nauchno-issledovatel'skiy institut zemledeliya.  
(Lithuania--Field crops-- Fertilizers and manures)  
(Lithuania--Peat)

LAUSMAN, Ctirad, inz.

A simple release amplifier. Sdel tech 13 no.1:29-30 Ja '65.

L 33203-66

REF ID: A66023817

SOURCE CODE: CZ/0015/66/006/001/0021/0022

AUTHOR: Lemman, Ctirad (Engineer); Pels, Frantisek (Engineer)

ORG: none

TITLE: Half-sine pulse generator

SOURCE: Sdelovaci technika, no. 1, 1966, 21-22

TOPIC TAGS: pulse generator, pulse amplitude, pulse width modulation

ABSTRACT: The article describes the principle of a half-sine pulse generator and presents its calculations and circuit, with numerous illustrations of its use in various applications. The pulse amplitude and width can be varied within broad limits. Orig. art. has: 9 figures and 8 formulas. [JPRS]

SUB CODE: 14, 09 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 001

Card 1/1 *pla*

LAUSMAN, Jiri, inz.

Project of a stone dam on the Ohre River at Skalka.  
Inz stavby 10 no.4:141-142. Ap '62.

1. Hydroprojekt, Praha.

LAUSMONOVA, Z.

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Monthly List of East European Accessions (EEAI) IC, Vol. 8, no. 6, June 1959

Uncl.



VENULET, F.; LAUSZ, H.

The influence of tobacco smoke on the level of Vitamin C in the internal organs of experimental frogs. Acta physiol. polon. 3 Suppl. 3: 255-256 1952. (CML 24:1)

1. Of the Institute of Experimental Pathology (Head--Prof. Fr. Venulet, M.D.) of Lodz Medical Academy.

LAUSZ, H.

LAUSZ, H. VENULET, F.

"Decrease of Vitamin C in Frog Organs under the Action under the Action of Tobacco  
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SO: Monthly List of East European Accessions. Vol. 3, no. 6  
/Library of Congress, June 1954, Uncl.

LAUSZ, Helena

Effect of tympanites on cardiac rhythm in the sensitized organism.  
Pat. polska 5 no.1:35-46 Ja-Mr '54.

1. Z Zakładu Patologii Ogólnej Akademii Medycznej w Łodzi.  
Kierownik: prof. dr F.Venulet.

(ALLERGY, experimental,

\*allergic tympanites, eff. on cardiac rhythm)

(ABDOMEN, diseases,

\*allergic tympanites, exper., eff. on cardiac rhythm)

(HEART, physiology,

\*eff. of exper. tympanites in sensitized organism)

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VENULET, F.; LAUSZ, H.

Effect of sensitization on ciliated epithelium in frog. Acta physiol.  
nolon. 8 no.3:558-559 1957.

1. Z Zakladu Patologii Ogolnej A. M. w Lodzi Kierownik: prof. dr.  
F. Venulet.

(EPITHELIUM, physiology,

ciliated, eff. of sensitization in frog (Pol))

(ALLERGY, experimental,

eff. of sensitization on ciliated epithelium in frog (Pol))

IAUSZ, Helena; VENULET, Franciszek

Disorders of ciliary movement in sensibilization. Med. dosw. mikrob.  
9 no.3:325-330 1957.

1. Z Zakladu Patologii Ogolnej Akademii Medycznej w Lodzi Kierownik:  
prof. dr nauk med. F. Venulet.

(ALLERGY, experimental,  
esophageal ciliary movement disord. (Pol))  
(ESOPHAGUS, physiology,  
ciliary movements in exper. allergy (Pol))

EXCERPTA MEDICA Sec.11 Vol.10/11 Oto-Rhino-Laryngo Nov57

LAUSZ H.

2078. LAUSZ H. Zakł. Patol. Ogól. A.M. Łódź. \*Wpływ składników dymu tytonio-  
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tobacco smoke on the ciliated epithelium OTOLARYNG.POL.  
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ski z III Kliniki Chirurgicznej A. M. w Łodzi Kierownik: prof dr. W.  
Tomaszewicz i z Zakładu Anatomii Patologicznej A. M. w Łodzi Kierownik:  
prof Dr. A. Fruszczyński.

(MEGACOLON, case reports  
x-ray manifest. & histopathol. (Pol))

LAUT, M.Ya. (Moskva)

Designing the coupling of shells of rotation according to the  
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(MIRA 14:6)

(Elastic plates and shells)



KOVAL'CHUK, M.F., inzh., red.[deceased]; BALDIN, V.A., red.;  
TUBIN, S.M., kand. tekhn. nauk, red.; LAUT, M.Ya., inzh.  
red.; LARIONOV, A.A., inzh., red.; BALIKHIN, M.I., red.;  
BOGUSHEVICH, Ye.N., inzh., red.; PAVLOV, S.M., inzh.,  
red.; SHIRIN, P.K., kand. tekhn. nauk, red.

[Construction specifications and regulations] Stroitel'-  
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Ch.3.; Pt.3. Sec. A. Ch.5-6. (MIRA 18:1)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po  
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Larionov, Bogushevich). 3. Chlen-korrespondent Akademii  
stroitel'stva i arkhitektury SSSR (for Baldin). 4. TSEN-  
tral'nyy nauchno-issledovatel'skiy institut stroitel'nykh  
konstruktsiy Akademii stroitel'stva i arkhitektury SSSR  
(for Tubin). 5. Gosudarstvennyy institut po proyektirova-  
niyu, issledovaniyu i ispytaniyu stal'nykh konstruktsiy i  
mostov (for Laut). 6. Mezhdovedomstvennaya komissiya po  
peresmotru Stroitel'nykh norm i pravil(for Balikhin, Pavlov).  
7. Nauchno-issledovatel'skiy institut organizatsii, mekhani-  
zatsii i tekhnicheskoy pomoshchi stroitel'stvu Akademii  
stroitel'stva i arkhitektury SSSR (for Shirin).

LAUT, V. N., Cand Tech Sci -- (diss) "Use of electron tubes with barrier  
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Sci USSR], 1958. 16 pp with <sup>diagrams</sup> ~~schemes~~ (Acad Sci USSR, Inst of Precision  
Mechanics and Computer Engineering), 130 copie~~s~~ (KL, 18-58, 99)

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28(2)		
	WISSE I BOOK EXPLOITATION	301/2675
	Moscow. Dom naucho-tekhnicheskoy propagandy in. V. E. Darnishnikov	
	Vyshtalovskiy tablitsa i yere primeneniye (Computation Technique and Its Application) Moscow Gosizdat, 1959. 391 p. (Soviet). Obshchestvo po razvoystremennuyu politicheskuyu i nauchnuyu sluzhu (RSFSR) 5,000 copies printed.	
	Ed. (title page): S. A. Lebedev, Academician; Ed. (inside book): V. I. Sevel'yan	
	Tech. Ed.: G. I. Motyev.	
	PURPOSE: This collection of articles is intended for scientific, engineering and technical personnel engaged in research, design and operation of digital and analog computers. It may also be used by students of vuses specializing in computers.	
	CONTENTS. The authors present fundamentals of digital computers, their elements and units such as arithmetic units, internal and external memory and control devices. They discuss the possibility of constructing computers using semiconductor elements and consider the fundamentals in the theory of logical circuits. They also discuss problems of programming and explain the operation of analog computers and their elements. Brief discussion of mathematical instruments is also presented. The articles were presented at a computer seminar arranged by Moskovskiy dom naucho-tekhnicheskoy propagandy izvesti V. E. Sevel'yan (Moscow Center for Scientific and Technical Propaganda Izvesti V. E. Sevel'yan) in 1957. No personalities are mentioned. References appear at the end of some articles.	
	Author: V. A., Engineer. Control Devices of Universal High-speed Computers	67
	The author discusses the principle of operation computer control devices and describes the control panel. He also explains methods of checking computer performance. There is 1 Soviet reference.	
	Author: V. L., Candidate of Technical Sciences. Operational Magnetic Memory Units.	105
	The author discusses the principle of using magnetic cores with the aid of a special type of electronic memory units and describes the method of storing, reading and recording information. He also discusses the matrix method of connecting cores and explains the operation of various matrix circuits such as those with a dynamic bias and with a transflumator. Memory units for multibit numbers are also discussed. There are 8 references: 2 Soviet and 6 English.	
	Author: V. F., Engineer. Operational Memory Units Using Cathode-ray Tubes	133
	The author discusses the operation of memory units and presents a block diagram of a parallel-connected memory circuit. He also discusses the operation of various types of tubes used in memory circuits and describes a barrier-grid storage tube and its operation. There are 2 references, both Soviet.	
	Author: L. V., Engineer. Operational Memory Unit Using Capacitors and Semiconductor Elements	156
	The author discusses the principle of operation of memory units using capacitors and semiconductor devices and describes their matrix circuits. He discusses the requirements of crystal diodes and presents the results of an experiment conducted with a memory unit using a DiP-8 type diode. He also discusses problems of increasing speed of operation of a memory unit and considers the possibility of using capacitors in memory circuits. There are 10 references: 1 Soviet and 9 English.	
	Author: M. V., External Devices of Universal High-speed Computers	168
	The author discusses input and output devices of high-speed computers and describes methods of feeding information to computers and obtaining calculated results. He also explains the operation of the external memory. There are no references.	

LAUT, Valeriy Nazarovich

The Cathode ray tube memory of the high speed electronic computer of the U.S.S.R. Academy of Sciences, V.N. Laut and L.A. Lashovich. London, New York, Pergamon Press, 1960

XI, 90 p. Illus., Diagr., Graphs, Tables.

Translated from the original Russian: Zapominayushcheye ustroystvo na elektronnoychebykh trubkakh bystrodeystvuyshchey elektronnoy schetnoy mashiny Akademii Nauk SSSR, Moscow, 1957.

At head of title: Akademiya Nauk SSSR. Institut Tochnoy Mekhaniki i Vychislitel'noy Tekhniki.

Bibliography: p. 88-89.

LAUT, V. N., Engineer

"Circuit Methods of Reducing "Implanting" in Memory Tubes and a Device for Reading with a Small Settling Time" a paper presented at the Conference on Methods of Development of Soviet Mathematical Machine-Building and Instrument-Building, 12-17 March 1956.

Translation No. 596, 8 Oct 56

*LAUT, V.N. (Valeriy Nazarovich)*

Laut, V.N., and Lyubovich, I.A.

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Zapominayushcheye ustroystvo na elektronno-luchevykh trubkakh bystrodeystvuyushchey elektronnoy schetnoy mashiny Akademii Nauk SSSR (Cathode-Ray Tube Memory Device in the High-Speed Electronic Computer of the Academy of Sciences, USSR) Moscow, Izd-vo AN SSSR, 1957. 88 p. 5500 copies printed.

Sponsoring agency: Akademiya Nauk SSSR. Institut tochnoy mekhaniki i vychislitel'noy tekhniki.

Responsible Ed.: Lebedev, S.A., Member of the Academy; Ed. of the Publishing House: Kudashev, A.I.; Tech. Ed.: Moskvicheva, N.I.

PURPOSE: This book is published to present the results of work done at the Academy of Sciences, USSR, in developing and designing a high-speed electronic computer and, in particular, its memory devices. This monograph is intended for specialists in computing machines.

COVERAGE: The Academy of Sciences high-speed electronic computer (RESM) and its internal memory device (VZU) both operate in parallel, which permits computation speeds much higher than those obtainable with memory devices operating in series. Three basic types of cathode-ray tubes (CRT) were investigated for

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## Cathode-Ray Tube Memory Device (Cont.)

use as electrostatic storage tubes: 1) Ordinary oscillotrons. 2) Cathode-ray tubes with internal regenerative feedback. 3) A special barrier-grid storage tube developed by the Ministry of Radio Engineering and designated the LN-1 "potentsialoskop". This tube contains an aluminum backplate covered with a dielectric coating consisting of an aluminum dioxide film, a barrier grid placed at a distance of 0.2 mm from the backplate, and a collector consisting of a circular conducting aquadag coating on the inside glass surface of the tube. The operation of the tube is based on the utilization of secondary electron emission with a secondary-emission ratio  $\sigma_{e \max} > 2$ . The ordinary oscillotrons (1) were found to be the cheapest from the point of view of production and to have a long life, but they have low resolution, greater screen nonuniformity, low output signal level and a lower stability caused by current drift. The CRT with internal regenerative feedback (2) can be operated without external feedback; however, these tubes are more complicated to produce and control than the other two types. The LN-1 tube (3) was found to be comparatively simple to produce and to have a simple writing and reading control system; its output signal is of an order larger than that of the other two types of tubes, it has greater resolution and lower dynamic range between signal and noise. These advantages determined the final structural development and serial production of this type of tube.

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Cathode-Ray Tube Memory Device (Cont.)

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The following are some of the basic parameters of the LN-1 storage tubes (under testing conditions established by the Ministry of Radio Engineering Industry): 1) The useful number of storage elements is  $1024$  with 400 scannings permissible in neighboring elements without regeneration of the input signal stored at a particular element (100 writings and 100 readings of "1" and 100 writings and 100 readings of "0"). 2) The capacity-discharge reading time of a particular element is  $5 \mu\text{sec}$ . 3) The signal current is about  $10 \mu\text{a}$ . 4) The beam-deflection sensitivity is  $0.35 \text{ mm/v}$ . The deficiencies of LN-1 storage tubes are as follows: 1) For beam positioning necessary in the selection of a particular target element a strictly determined potential is required which, in turn, requires a high quality of power supply. 2) The same strict quantitative requirement applies to writing code differentiation ("1" from "0"). 3) The retention time of a stored charge pattern is comparatively low. 4) The large dynamic range between the reading and writing signals leads to a loss of sensitivity of the reading amplifier. The BESM has the following basic parameters: 1) it contains 39 operating and 9 reserve memory sets; 2) each set has  $1024$  storage elements; 3) the maximum operating frequency is  $80 \text{ kc}$ ; 4) the permissible number of scannings in neighboring elements (when writing "1" in them) without regeneration of the input signal stored at a particular element, is 500; 5) there are 1073 vacuum tubes,

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Cathode-Ray Tube Memory Device (Cont.)

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431 diodes and 39 special CRT of the LN-1 type; of these, 200 vacuum tubes and 112 diodes are used only in the control device; 6) there are 378 blocks standard for the BESM, and 7) 240 standard VZU blocks. The use of interchangeable standard blocks in the VZU increased somewhat the number of tubes but made the production and the operation of the computer easier. Almost all vacuum diodes can be replaced by semiconductors. According to the authors, the VZU developed by the Academy can be compared in speed of operation with similar devices of foreign construction, for example with the IBM-701. Also, the permissible number of readings without regeneration is 500 for the VZU, more than 3 time greater than the 148 of the IBM-701 memory device. The VZU also has decided advantages over the high-speed M-2 computer of the Power Engineering Institute, AS USSR, which is equipped with oscillograms, with 512 storage elements and 170 permissible readings from a particular element without erasing information stored in adjacent elements. A new type of "potentialoskop," the LN-4, makes it possible to obtain four times as many memory elements and twice as many readings without regeneration as can be obtained with the LN-1. There are possibilities of further improvement in this type of CRT, which is not true of ordinary oscillograms. These CRT have the disadvantage of shorter life (1000 to 2000 hrs) and higher cost, because until recently they were produced in the laboratory, and industrial production started only recently and in small quantities. This

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Cathode-Ray Tube Memory Device (Cont.)

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disadvantage is compensated by the fact that one 1N-4 tube can provide the same number of memory elements as 8 oscillograms. The high-speed operation of these tubes is expected to exceed 100 to 120 kc, and this is why in the very high-speed computers requiring 100 to 200 thousand operations per sec and a large storage volume only this special type of tube can be applied. The VZU was developed by a group of engineers under the supervision of the chief designer of the BESM, S. A. Lebedev, Member of the Academy. The following engineers worked on the project: V. N. Laut and L. A. Lyubovich (authors of the monograph), I. D. Vizun, A. V. Avayev and V. S. Mitrofanov. Engineers O. K. Shcherbakov and Yu. I. Vizun participated in the development of stabilized power supplies. The authors thank the following persons for help in preparing the monograph: A. M. Litvinov and Ye. I. Mamonov, Candidates of Technical Science, and A. Ya Tyurin, V. A. Mel'nikov and A. N. Zimarev, engineers. According to the authors, the problem of development of the potentials which an insulated target element or a free electrode will acquire under the influence of electron bombardment was first investigated in 1935 by S. I. Katayev (p. 15). The monograph is illustrated by photography, oscillograms, connection diagram, graphs and drawings. There are 12 references, of which 8 are Soviet (including 2 translations) and 4 English.

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Cathode-Ray Tube Memory Device (Cont.)

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"Socialist transformations in the western provinces of the Ukraine  
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PANASHCHENKO, I.P., dots.; CHONTULOV, V.T., dots.; POGREBINSKIY, A.P.,  
prof.; SPATAR, N.G., dots.; LAUTA, S.P., dots.; USTINOVA, L.A.,  
dots.; KRIVEN', P.V., prof.; FILIPPOV, V.I., dots.; GOLUBEV, V.A.,  
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[Economic history of foreign countries] Ekonomicheskaya istoriya  
zarubezhnykh stran; kurs lektsii. Kiev, Izd-vo Kievskogo univ.  
Pt.2. [From the 1870's to the present time] Ot 70-kh godov XIX v.  
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1. Prepodavateli kafedr politicheskoy ekonomii i istorii narodno-  
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44601

S/169/62/000/012/095/095  
D228/D307

99130

AUTHOR: Lauter, E.A.  
TITLE: Proof of the influence of the solar cycle on the lower ionosphere  
PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 29-30, abstract 126208 (Gerlands Beitr. Geophys., 71, no. 1, 1962, 58-61 (Ger.; summary in Eng.))

TEXT: The influence of the solar cycle on the results of multiyear (1951-1959) absorption measurements, made on low frequencies (245 kc/s) at Kjulungsborn (E. Germany), is considered. The measurements consisted of the recording of the radio emission reflectance of a transmitter, situated at a distance of 180 km. The difference in absorption between the sunspot maximum and minimum is a function of the sun's zenith angle  $\chi$ . Superposition of deflecting and non-deflecting absorptions induces a well expressed maximum ( $\sim 15$  db) in the difference of attenuations when  $\chi = 70^\circ$ . If the magnitude of  $\chi$  is constant and close to the peak value,

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Proof of the influence ...

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the mean monthly values of L' correlate well with the relative sun-spot number R and less well with the magnetic activity index  $A_K$ .  
The total coefficient of correlation equals 0.96, but regression linearity lasts only up to  $R = 150$ . For higher solar activity the properties of the D-region vary little as the magnitude of R increases.

[Abstracter's note: Complete translation]

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L 12770-66 EWT(1)/FCC GW

ACC NR: AP6002748

(N)

SOURCE CODE: UR/0203/65/005/006/1034/1045

AUTHOR: Lauter, Ye. A.; Khruskova, Yu.; Nestorov, G.; Shprenger, K.

ORG: Ionospheric Research Observatory, Kdhlungsborn, GDR (Observatori-  
ya ionosfernykh issledovaniy)

39

B

TITLE: Variations in ionospheric absorption with respect to time and  
space in the long-wave region when the sun is low and at night

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 6, 1965, 1034-1045

TOPIC TAGS: ionospheric absorption, ionospheric radio wave, solar ac-  
tivity

ABSTRACT: The authors give the results of measurements made over sever-  
al years by the atmospheric probe method in the long-wave region on  
lines up to 350 km long in Middle and Eastern Europe. The frequency re-  
lationship is given for midnight absorption in the long, medium-long  
and medium wavelength regions with a maximum of about 17 db at 200 to  
400 kc. The diurnal variation in ionospheric absorption in the long-wave  
region when the sun is low and at night shows that absolutely nocturnal  
conditions prevail at solar zenith angles  $\chi > 100^\circ$ , while the photodisso-  
ciation process takes place at values of  $\chi$  to  $-9^\circ$ . The annual varia-

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ACC NR: AP6002748

tion in nighttime absorption has the form of a double curve with maxima in summer and winter, and minima immediately following the equinoxes. The injection of high-energy particles into the lower ionosphere during and following magnetic storms strongly increases absorption in the long-wave region, especially at  $\chi$  between  $-10$  and  $+10^\circ$ , and at night. In these cases, the frequency at a geomagnetic latitude of  $55^\circ$  depends on the solar activity cycle, while penetration of high-energy particles below  $50^\circ$  is extremely rare. Orig. art. has: 12 figures and 1 table. [14]

SUB CODE: 17,04 SUBM DATE: 28Apr65/ OTH REF: E014/ DATD PRESS: 4/84

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HW

I 12820-66 N EWT(d)/EWT(1)/FCC/EWP(j)/EWA(h) RB/GW/WS-2  
 ACC NR: AP6002749 SOURCE CODE: UR/0203/65/005/006/1046/1051  
 AUTHOR: Lauter, Ye. A.; Trzhiska, P. 36  
 ORG: Ionospheric Research Observatory in K hlungsborn, GDR (Observato-  
 riya ionosfernykh issledovaniy) B  
 TITLE: Annual variation of absorption in the ionosphere in the medium  
 and long-wave regions  
 SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 6, 1965, 1046-1051  
 TOPIC TAGS: ionospheric absorption, ionospheric radio wave  
 ABSTRACT: The authors compare the results of absorption measurements  
 (atmospheric probe method) in the middle latitudes on equivalent fre-  
 quencies of 125, 185, 730, and 1000 kc. A strong reduction is observed  
 in the intensity of the winter anomaly as the frequency decreases. Mea-  
 surements at a constant zenith angle  $\chi$  show that the winter anomaly in-  
 creases with altitude in the mesopause region. The absorption shows a  
 minimum at all frequencies in the spring (April). It is shown that the  
 annual behavior of absorption in the 150-500-kc range has two sharply  
 defined maxima--one in the summer and one in the winter. ... summer (May-  
 -September) anomaly of increased absorption predominates in the lower  
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ACC NR: AP6002749

frequency region. Absorption anomalies are also nearly fully developed at solar zenith angles between 100 and 9.0°. Therefore if the relationship  $\cos^n \chi$  is used to describe the diurnal variation in total absorption, the exponent  $n$  is underestimated. The authors discuss the significance of the observed annual variations of processes in the D layer of the ionospheric plasma with regard to the structure and dynamics of the mesosphere. Orig. art. has: 3 figures, 1 table, and 2 formulas. [14]

SUB CODE: 17, 04  
ATD PRESS: 4/83

SUBM DATE: 03Apr65/ ORIG REF: 000/ OTH REF: 009

JW  
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Z/031/61/009/005/003/004  
D007/D102

AUTHORS: Poláček, J., Engineer; Lauterbach, J.; Vošahlík, R.;  
and Kulišek, B.

TITLE: Theory and application of explosive metal forming

PERIODICAL: Strojírenská výroba, v. 9, no. 5, 1961, 240 - 245, 248

TEXT: The Závody na výrobu vzduchotechnických zařízení, n. p. Milevsko, (Plant for the Production of Pneumatic Equipment, Milevsko) is preparing the introduction of explosive forming for VLC pressure containers mounted on RR carriages. The article describes tests on a one-third-size model (actual dimensions of the vessel are shown in Fig. 1), performed to study the technology of this advanced metal forming method. Factors which must be considered in explosive forming are: (1) Choice of a suitable explosive charge; (2) the transmitting medium; (3) shape, dimensions and material of the mold; (4) material for forming; and (5) technological preparation of the working site. All types of brisant explosives are suitable for explosive forming. Those used in the described tests were cast TNT, plastic

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D007/D102

## Theory and application...

NP 10, gelatine high explosive (Perunit 20) and ammonium nitrate high-explosive powder. Properties of Czechoslovak commercial explosives are listed in Table I. The plastic NP 10 explosive was chosen for testing of annular-, ball-, rod-, and pear-shaped charges. The annular shape is not suitable since it is not possible to ignite the entire ring simultaneously and the blank corrugates and tears. The ball-shaped charge (Fig. 4) is more suitable and can be ignited with one detonator placed in the center. However, great pressure acts on the bottom of the mold and a secondary reaction presses the blank upwards with a resultant negative influence on the final shape of the forging. Better results were achieved with rod-shaped charges which can be ignited either at the top, at the middle, or at the bottom (Fig. 6). When bottom ignition is applied (Fig. 7), shock-waves disperse conically and the pressure acting on the mold bottom is considerably smaller, reaching only 2,000 - 2,500 kg/cm<sup>2</sup>. Since the top part could not be drawn out completely with any of these charge shapes, a modified pear-shaped charge was tested which was suspended with the smaller end downwards and ignited at the bottom.

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Theory and application...

However, the desired effect was still not reached. Since empirical results are still insufficient, the proper charge shape and initiation point will have to be experimentally found for each specific case. Water was used in the tests to transmit the explosive force to the blank. The more advantageous closed mold (requiring smaller charges) could not be used since the mold in this specific case would have been too heavy. However, in the upper regions of an open mold, the transmitted pressure rapidly decreases due to the dilution of the transmitting medium, which explains the fact that the upper regions of the blank were not drawn out completely. The mold used in the tests consisted of two welded halves made of 11 523 grade steel sheet. The mold shell was reinforced by 2 strong hoops and a number of radial struts. The mold was not annealed, despite the large number of welds which caused considerable stresses, and was loosely placed on the base plate. The blank was secured either by clay to the steel base plate, or by a 50 mm thick rubber lining clipped to the blank. The tests revealed that the mold bottom should be made of a material with elastic properties. The originally used 50 and 80 mm thick plates of rolled 11 370 steel bent and

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D007/D102

Theory and application...

ruptured after several tests with the grain structure of the fracture resembling that of cast steel. When covered with a 50 mm rubber lining, the steel bottom plates resisted shock waves till the lining was mechanically damaged. A gap formed by placing spacers between the two mold halves facilitated air escape from the space between the mold and the blank. The gap width was varied within the range of 2 - 6 mm. Since the tests were made in an open mold, adequate safety measures had to be taken. When observing the safety regulations of Edict no. 305, published in issue 132 of the Úřední listy (Official Bulletin), dated Oct 24, 1952, explosive forming does not imply any more danger than common pressing. Approximately 45 tests were performed on the rather large one-third-size model. They revealed some technological problems which would not have been recognized had the tests been performed with a smaller model. The gathered experiences, which led to the final design of the mold, can be summarized as follows: (1) Most advantageous is a rod-shaped charge with bottom initiation; (2) the shock-wave effect on the bottom of the mold must be reduced by increasing the distance

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